

INTELLIGENT INTERACTIVE SYNTHESIZER

SURFACE MOUNT MODEL: MFSH615712-100

OPTIMIZED LOOP PARAMETER

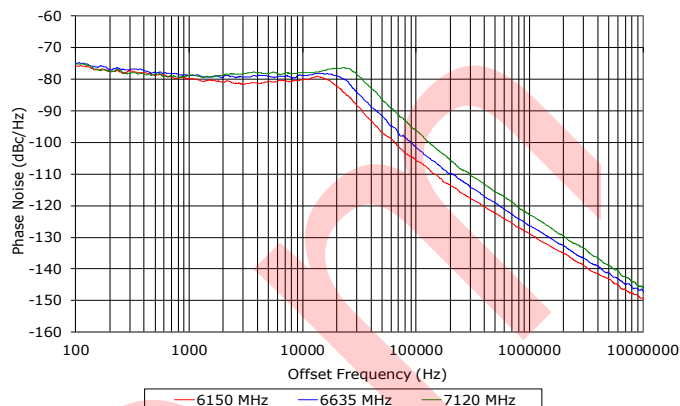
6150 - 7120 MHz

FEATURES:

- ▶ Small Size, Surface Mount (0.6" x 0.6")
- ▶ Low Phase Noise
- ▶ Standard Programming Interface
- ▶ Ultra Wide Tuning Range
- ▶ Lead Free - RoHS Compliant
- ▶ Patented REL-PRO® Technology
- ▶ Buffered Output



Phase Noise



SPECIFICATIONS

Frequency	6150 - 7120 MHz		
Step Size	1 MHz		
Reference Input Frequency	10 MHz ¹		
Reference Input Voltage	1.0 V p-p to 3.0 V p-p		
Bias Voltage	Vcc	V (Vdc)	I (mA Max.)
	VCO	+5	55
	Digital	+3	18
	Tune	+18	5
Output Power	0 dBm (Min.)		
Spurious Suppression	60 dB (Typ.)		
Harmonic Suppression	25 dB (Typ.)		
Settling Time	10 mSec (Typ.) ²		
Output Impedance	50 Ohms (Nom.)		
Lock Detect Indicator	CMOS 3 V		
Typical Phase Noise	Offset	Phase Noise	
	@ 10 kHz	-78 dBc/Hz	
	@ 100 kHz	-100 dBc/Hz	
Operating Temperature Range	-40 to +85 °C		
Programming	See Application Note: AN7500		

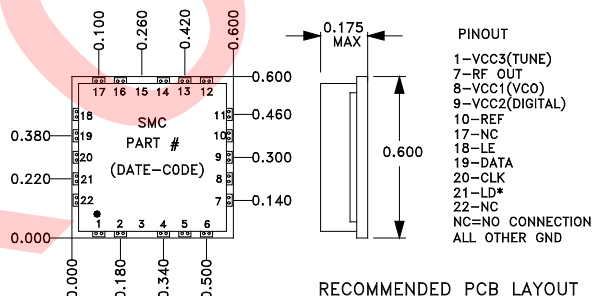
¹ Reference input frequency is programmable (See AN7500) in multiples of the step size, 10 MHz is the factory default setting, 150 MHz (Max.)

² From the rising edge of LE to stable lock detect

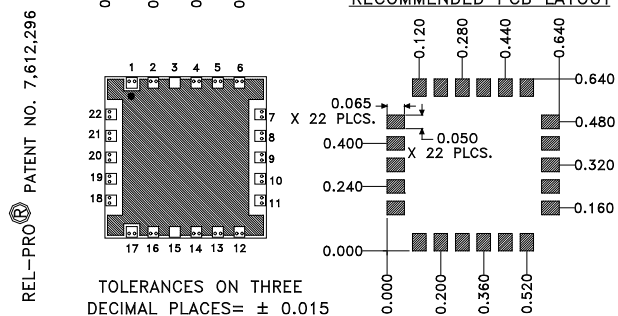
Absolute Maximum Ratings

Storage Temp. Range	-55 to +125 °C
Bias Voltage (Digital)	+3.6 V
Bias Voltage (VCO)	+5.5 V
Bias Voltage (Tune)	+18.5 V
DC Voltage Applied to RF Out	±25 V

Package # 367



RECOMMENDED PCB LAYOUT



* High when locked (Source/Sink 500 uA)

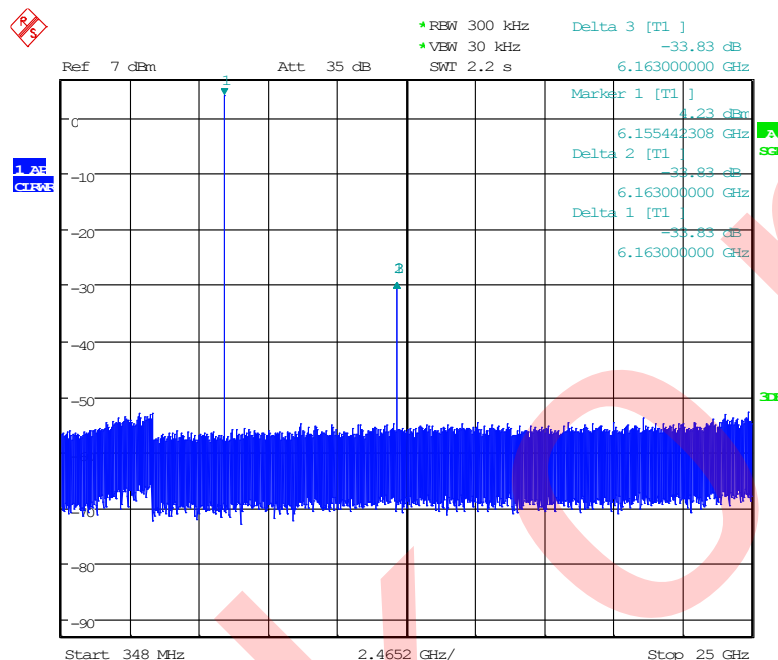
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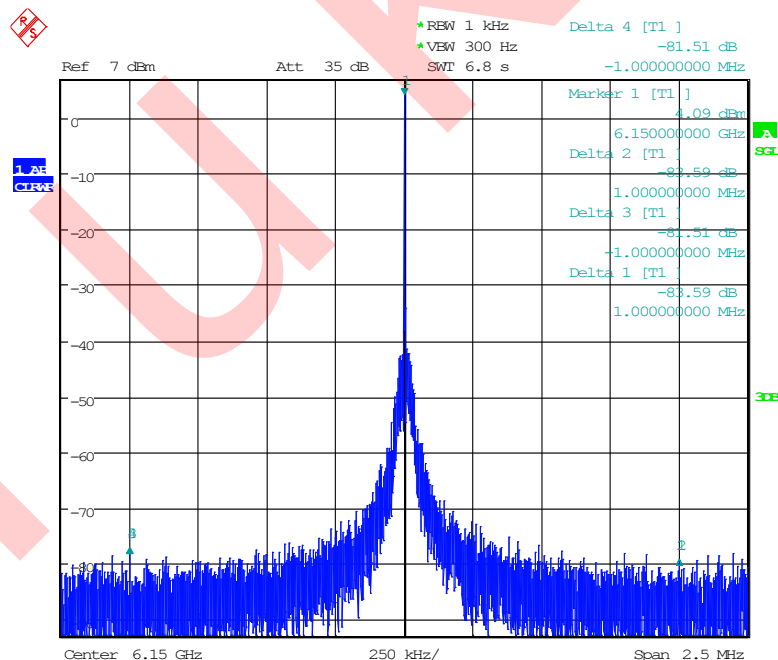
OPTIMIZED LOOP PARAMETER

6150 - 7120 MHz

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

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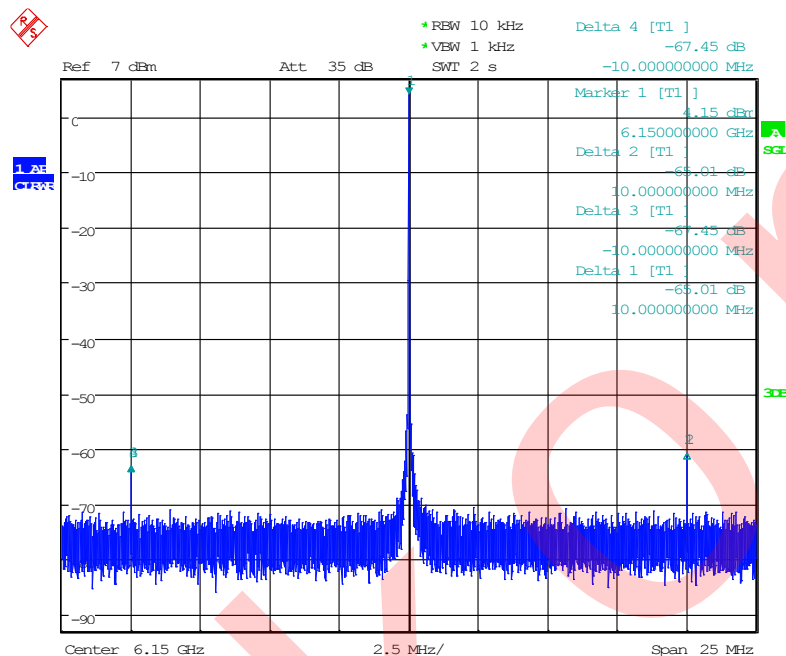
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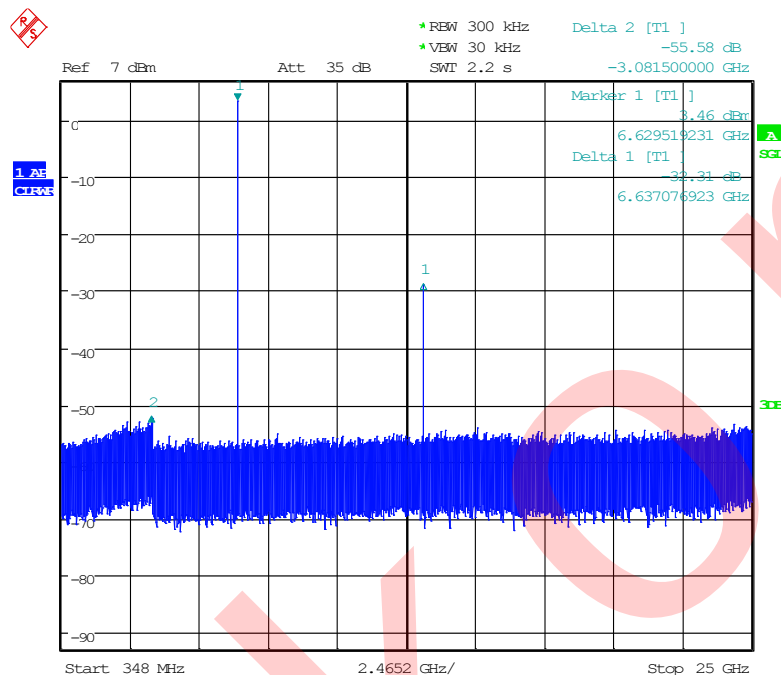
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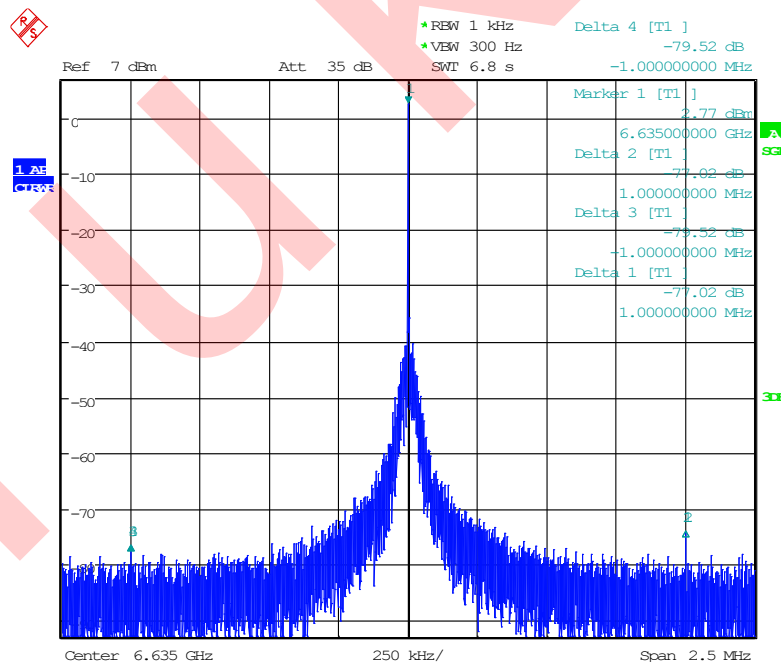
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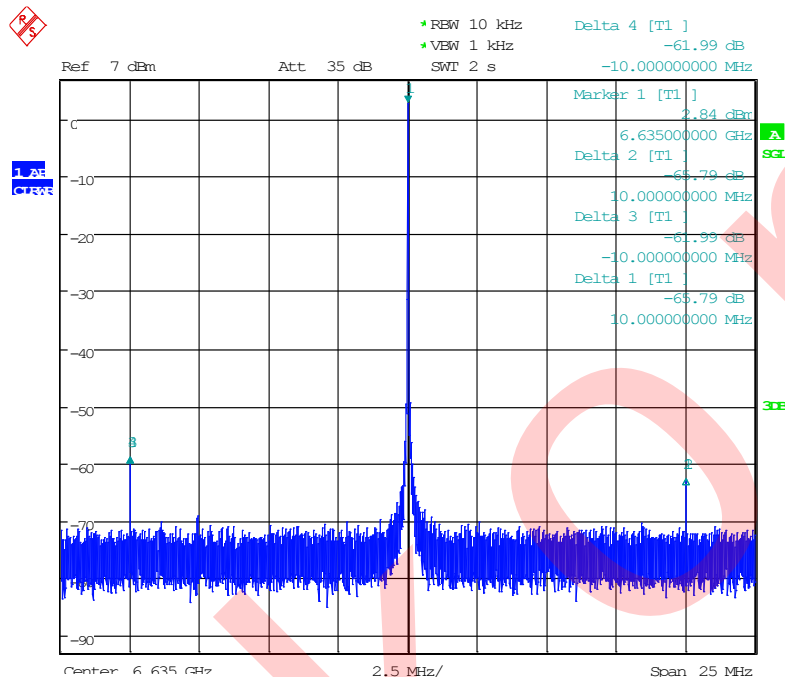
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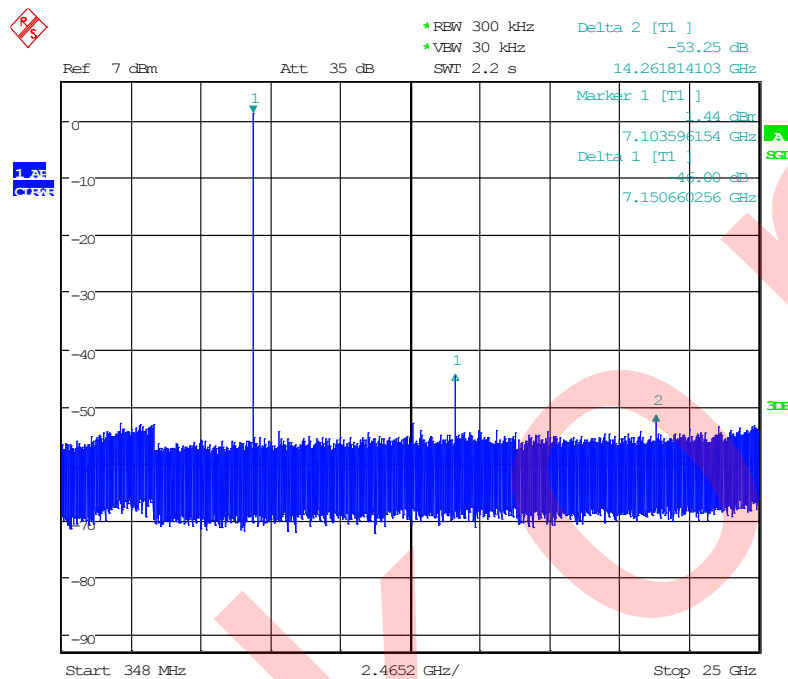
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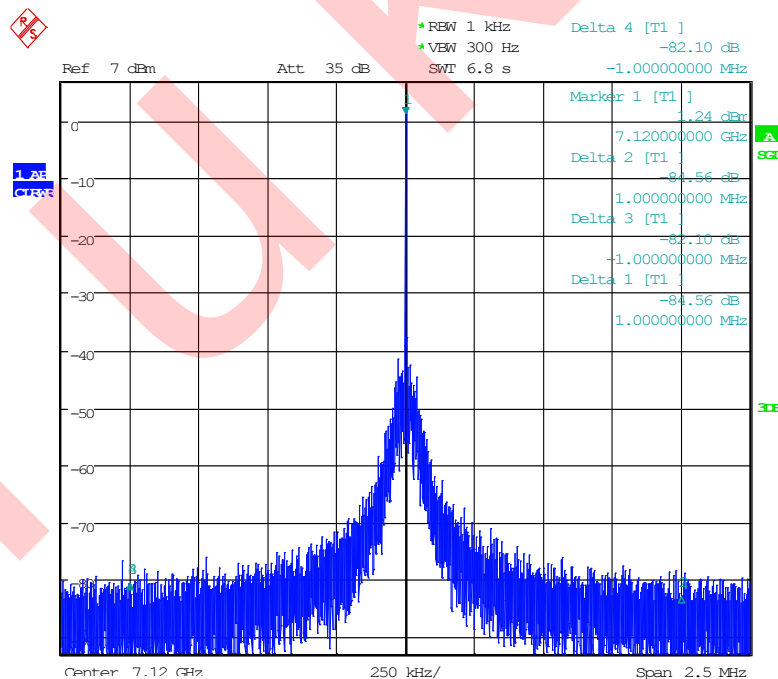
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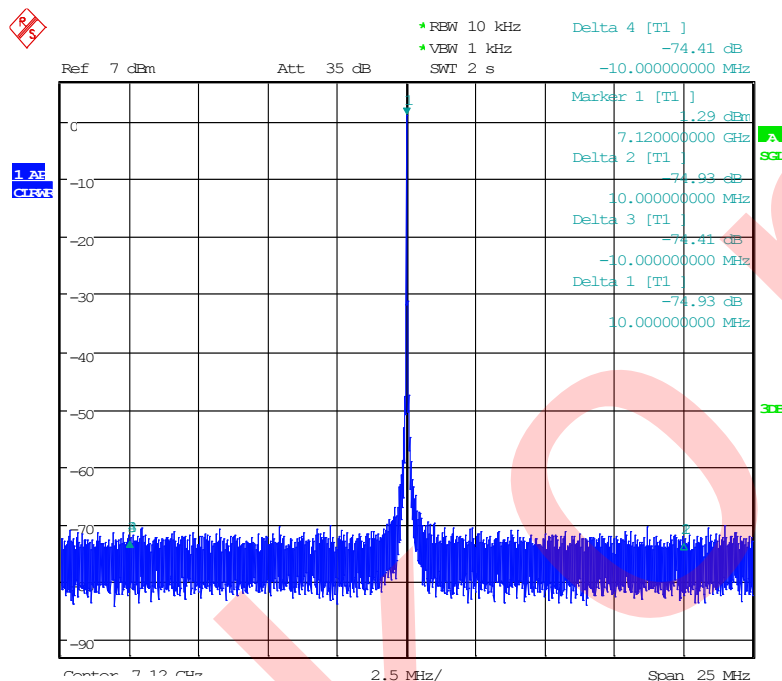
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